

## ABSTRACT

A network or interconnect structure which includes a plurality of nodes which are interconnected within a hierarchical multiple level structure. The level of each node is determined by the position of the node within the structure and data messages move from node to node from a source level to a destination level. Each node within the interconnect structure is capable of receiving simultaneous data messages at its input ports from any other node and the receiving node is able to transmit each of the received data messages through its output ports to separate nodes in the interconnect structure to one or more levels below the level of the receiving node.